

REMARKS

The Office Action dated August 29, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, and the attached RCE are submitted as a full and complete response thereto.

Claim 1 has been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added. Claims 2, 4, 7-11, 13, 15 and 16 have been withdrawn. Claims 1, 3, 5, 6 and 14 are submitted for consideration.

Claim 1 was rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent No. 62233540 to Katada (hereinafter Katada). The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in independent claim 1, or any claims dependent thereupon.

Claim 1, upon which claims 3, 5, 6 and 14 depend, recites an oscillating inner gearing planetary gear system including an internal gear, an external gear which meshes with the internal gear, an eccentric body which oscillatingly rotates either the internal gear or the external gear, an input shaft and a output shaft. The system also includes a middle shaft which has an orthogonal gear, the orthogonal gear linking the middle shaft to the input shaft at the right angle. The system further includes a main casing which houses the oscillating inner gearing planetary gear system. Either the internal gear or external gear is oscillatingly rotated via the input shaft, the orthogonal gear, the middle shaft, and the eccentric body. The orthogonal gear links the middle shaft to the input shaft at the right angle inside the main body casing.

As will be discussed below, Katada fails to disclose or suggest the elements of any of the presently pending claims.

Katada discloses an eccentric body shaft 2 with eccentric bodies 2, where an input rotation shaft 1 is coupled to the eccentric body shaft. Outer-toothed gears 5 mesh with the eccentric bodies 3 via a roller 6. The outer-toothed gears 5 have outer teeth 7 including a trochoidal tooth shape on the outer periphery. An inner-toothed gear 8 combines with a casing on the outside and the inner-toothed gear 8 is installed on the fixed side. Fig. 1. Fig. 3 of Katada shows that a bevel gear 28 is fixed to an end of an eccentric body shaft 27 extending orthogonally to the eccentric body shaft, whereby the output rotation is taken out in the direction orthogonal to the input rotation shaft 29.

Applicant submits that Katada does not each or suggest each feature recited in the pending claims. Claim 1, in part, recites a main casing which houses the oscillating inner gearing planetary gear system, wherein the orthogonal gear links the middle shaft to the input shaft at the right angle inside the main body casing. Katada does not teach or suggest this feature.

In Katada, the oscillating inner gearing type planetary gear system **without orthogonal gears 28 and 30** is housed in the main body casing. Katada discloses that the orthogonal gears 28 and 30 are located **outside** the main body casing, **as additional members**. (Emphasis added) Specifically, Katada discloses that the orthogonal gears 28 and 30 link the middle shaft 27 to the input shaft 29 at a right angle **outside the main body casing**. (Emphasis added)

However, Katada fails to teach or suggest, at least, orthogonal gear which would link a middle shaft to an input shaft at a right angle inside the main body casing. In the present invention, the hypoid pinion 104A and the hypoid gear 128 (orthogonal gear set 106) are housed as essential members inside the main body casing. The orthogonal gears (104A, 128) link the middle shaft 108 to the input shaft 104 at a right angle **inside the main body casing 102**, so that, for example a number of parts can be reduced. Because Katada fails to disclose or suggest all the features recited in claim 1, Katada fails to provide the critical advantage of the claimed invention. Based on the arguments presented above, Applicant asserts that the rejection of claim 1 under 35 U.S.C. 102(b) should be withdrawn because Katada fails to teach or suggest each element of claim 1.

Claims 1, 3, 5, 6 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,699,152 to Tanaka (hereinafter Tanaka) in view of Katada. According to the Office Action, Tanaka teaches all of the elements of claims 1, 3, 5, 6 and 14 except for teaching that the middle shaft is arranged at a right angle to the input shaft, the middle shaft having an orthogonal gear, and the orthogonal gear linking the middle shaft to the input shaft at a right angle. Therefore, the Office Action combined the teachings of Tanaka and Katada in an effort to yield all of the elements of claims 1, 3, 5, 6 and 14. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in claims 1, 3, 5, 6 and 14.

Independent claim 1 has been discussed above. Tanaka generally describes a speed reduction gear assembly which facilitates the mounting of a motor while securing a hollow space in a portion of a rotation center. See column 1, lines 46-50. A reduction gear 10 and an eccentric member shaft 17 are provided. See column 2, lines 15-17 and 40-49. As the eccentric member shaft 17 rotates, the external gears 19 undergo oscillatory motion. An input gear member 25 is fitted to a bearing housing 25a by press fitting. See column 3, lines 5-6. A hollow cylindrical intermediate gear 30 is provided in portion of the rotation center of the reduction gear 10 between the reduction gear 10 and a motor mounting member 24. See column 3, lines 29-34. Two gears, i.e., a large gear 30a and a small gear 30b, are provided as the intermediate gear 30, and the large gear 30a meshes with the aforementioned input gear 25b. See column 3, lines 35-39.

Applicant submits that the combination of Tanaka and Katada does not each or suggest each feature recited in the pending claims. Claim 1, in part, recites a main casing which houses the oscillating inner gearing planetary gear system, wherein the orthogonal gear links the middle shaft to the input shaft at the right angle inside the main body casing. Takana does not teach or suggest this feature.

As noted above, Katada does not cure any of the deficiencies of Tanaka. In particular, Katada also does not teach or suggest a main casing which houses the oscillating inner gearing planetary gear system, wherein the orthogonal gear links the middle shaft to the input shaft at the right angle inside the main body casing, as recited in claim 1, upon which claims 3, 5, 6 and 14 depend.

Therefore, Applicant submits that the rejection under 35 U.S.C. 103(a) should be withdrawn because neither Katada nor Tanaka, whether taken singly or combined, teaches or suggests each element of claim 1. Claims 3, 5, 6 and 14 depend on claim 1 and should be allowed at least because of their dependence on claim 1, in addition to the further limitations recited in claims 3, 5, 6 and 14.

As noted previously, claims 1, 3, 5, 6 and 14 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1, 3, 5, 6 and 14 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time
Request for Continued Examination (RCE) Transmittal
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